

REMARKS:

Claims 1-24 have been rejected under 35 USC 112. Accordingly, the offending amendments made in the prior response have been withdrawn and Applicants proceed to distinguish the claims over the art cited in the previous Office Action dated March 22, 2004.

In the prior Office Action, claims 1-21 were rejected under 35 USC 103(a) as being unpatentable over Hirano (JP 61-145720 A, hereinafter "Hirano") in view of Hines et al. (WO 01/41214, hereinafter "Hines").

Claim 1 has been amended to include the limitation that a width of the shields at a first point 410 on the shields proximate to the magnetic recording disk are less than widths thereof at a second point 412 on the shields distant the magnetic recording disk, the widths being measured in a direction parallel to the gap defined by the shields. Support for this amendment is clearly described on p. 10, lines 1-6 in conjunction with FIGS. 4 and 5 of the present application. FIG. 4 shows the width of one of the shields (along the plane of the page and parallel to the disk media 404), while FIG. 5 shows the direction of flow of the magnetic field 505. This configuration provides a dual shield structure with a low profile (as shown in FIG. 5) yet with a greater mass to carry more flux to the EMR sensor 406, thus minimizing size while greatly improving the MR signal.

In contrast, Hirano does not teach or suggest that a width of the core along the track width near the gap 15 be less than a width of the core away from the gap. Rather, the tapering referred to by the Examiner is in a direction *perpendicular* to the track width. Referring to FIG. 5 of Hirano, the width of the core 51 in a direction parallel to the track width and perpendicular to the edges of the core defining the read gap appears to be uniform throughout. Tapering in this direction requires much more real estate on the head.

Applicants respectfully request reconsideration and allowance of claim 1, particularly as amended.

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Claims 2-15, 22-24 incorporate the limitations of claim 1, particularly as amended, and therefore are also believed to be allowable over the art of record.

In addition, claim 22 requires that the gap be offset from a center plane extending along a center line of the EMR sensor, as shown in FIG. 5.

Claim 23 further defines the direction of measurement for the widths.

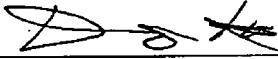
Claim 24 further requires that the first shield angle towards the second shield at the first point, while the second shield does not angle towards the first shield, as shown in FIG. 5. This is not disclosed in Hirano. In fact, Hirano indicates that the BP elements are deliberately tilted towards each other, as shown in the figures and described at p. 6, lines 17-20.

Claims 16, 18-21 have been amended in a manner similar to claim 1, and therefore are also believed to be allowable over the art of record. Accordingly, reconsideration and allowance of claims 16, 18-21 is respectfully requested.

Claims 17 and 21 has been amended in a manner similar to claim 24, and therefore are also believed to be allowable over the art of record. Accordingly, reconsideration and allowance of claims 17 and 21 is respectfully requested.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-2587 (Order No. SJO920010087US1).

Respectfully submitted,

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